

Amendments to the Claims:

1. (Currently Amended) A cordless microscope comprising:

a stand;

a stage supported by the stand for holding specimens to be viewed;

an objective lens supported by the stand for magnifying an image of a specimen on the stage;

an eyepiece lens supported by the stand and coupled with the objective lens for further magnifying the image of the specimen and for permitting a user to view the image; and

A a light source assembly for illuminating the stage, the light source assembly including - a circuit board, and

a plurality of LEDs mounted on the circuit board for projecting light toward the stand stage, wherein the LEDs are arranged on the circuit board in a general Y-shaped configuration.

2. (Original) The cordless microscope as set forth in claim 1, the light source assembly further including a first connector mounted on the circuit board, electrically connected with the LEDs, and configured for connecting to a battery for powering the LEDs.

3. (Original) The cordless microscope as set forth in claim 2, the light source assembly further including a second connector mounted on the circuit board and configured for connecting to a switch so as to electrically connect the switch between the battery and the LEDs for switching the LEDs between on and off states.

A 4. (Currently Amended) The cordless microscope as set forth in claim + 3, the stand including a base in which the light source assembly is mounted and an upstanding arm on which the stage, the objective lens, and the eyepiece lens are supported.

5. (Original) The cordless microscope as set forth in claim 4, wherein the circuit board is circular in shape and configured for fitting within a circular opening in the base.

6. (Original) The cordless microscope as set forth in claim 1, wherein the circuit board is coated with a reflective material to reflect light emitted from the LEDs.

7. (Original) The cordless microscope as set forth in claim 1, wherein the light source assembly includes 4 LEDs.

8. (Original) The cordless microscope as set forth in claim 3, the light source assembly further including a third connector configured for connecting to a battery recharger for recharging the battery.

9. (Currently Amended) The cordless microscope as set forth in claim 1, wherein the structure of the LEDs have produces a highly-focused angle of illumination so that most of the light from the LEDs is projected upwardly toward the stage.

10. (Original) The cordless microscope as set forth in claim 9, wherein the angle of illumination of the LEDs is approximately 20 degrees.

11. (Original) The cordless microscope as set forth in claim 4, wherein the battery is mounted within the base.

12. (Canceled)

13. (Currently Amended) A cordless microscope comprising:

a stage for holding specimens to be viewed; and

a light source assembly for illuminating the stage, the light source assembly including -

a circuit board, and

a plurality of LEDs mounted on the circuit board for projecting light toward the stage,

wherein the light source assembly is removable and replaceable.

14. (Original) The cordless microscope as set forth in claim 13, the light source assembly further including a first connector mounted on the circuit board, electrically connected with the LEDs, and configured for connecting to a battery for powering the LEDs.

15. (Original) The cordless microscope as set forth in claim 13, wherein the light source assembly includes 4 LEDs.

16. (Original) The cordless microscope as set forth in claim 14, the light source assembly further including a second connector mounted on the circuit board and configured for connecting to a switch so as to electrically connect the switch between the battery and the LEDs for switching the LEDs between on and off states.

17. (Original) The cordless microscope as set forth in claim 16, the light source assembly further including a third connector configured for connecting to a battery recharger for recharging the battery.

18. (Currently Amended) The cordless microscope as set forth in claim 13, wherein the structure of the LEDs ~~have~~ produces a highly-focused angle of illumination so that most of the light from the LEDs is projected upwardly toward the stage.

19. (Currently Amended) A light source assembly for use in a microscope, the light source assembly comprising:

a reflective coated circuit board,

a plurality of LEDs mounted on the circuit board for projecting light upwardly from the

circuit board, wherein the structure of the LEDs produces a highly-focused angle of illumination so that most of the light from the LEDs is projected upwardly; and

a first connector mounted on or coupled with the circuit board, electrically connected with the LEDs, and configured for connecting to a battery for powering the LEDs.

20. (Original) The light source assembly as set forth in claim 19, further including a second connector mounted on or coupled with the circuit board and configured for connecting to a switch so as to electrically connect the switch between the battery and the LEDs for switching the LEDs between on and off states.

21. (Original) The light source assembly as set forth in claim 19, wherein the circuit board is circular in shape.

22. (Original) The light source assembly as set forth in claim 19, wherein the circuit board is coated with a reflective material to reflect light emitted from the LEDs.

23. (Original) The light source assembly as set forth in claim 19, wherein 4 LEDs are mounted on the circuit board.

24. (Original) The light source assembly as set forth in claim 20, further including a third connector configured for connecting to a battery recharger for recharging the battery.

25. (Canceled)

26. (New) A cordless microscope comprising:

a stand;

a stage supported by the stand for holding specimens to be viewed;

an objective lens supported by the stand for magnifying an image of a specimen on the stage;

an eyepiece lens supported by the stand and coupled with the objective lens for further magnifying the image of the specimen and for permitting a user to view the image;
and

a light source assembly for illuminating the stage, the light source assembly including -

a circuit board,

a plurality of LEDs mounted on the circuit board for projecting light toward the stage,

wherein the LEDs emit white light and provide over five thousand millicandellas of illumination, and

a connector mounted on the circuit board, electrically connected with the LEDs, and

configured for connecting to a battery for powering the LEDs, wherein the light source assembly is operable to provide over forty hours of continuous operation of the cordless microscope.

40-400x
decade power

see
pgs. 5-6

27. (New) A cordless microscope comprising:

a stand; ⁽¹¹⁹⁾

a stage supported by the stand for holding specimens to be viewed; ⁽¹⁰⁰⁾

an objective lens supported by the stand for magnifying an image of a specimen on the stage; ⁽¹²¹⁾

an eyepiece lens supported by the stand and coupled with the objective lens for further magnifying the image of the specimen and for permitting a user to view the image; ⁽¹²⁵⁾

an elongated lamp holder having an opening at an end of the holder;

an internally-reflective tube positioned within the lamp holder; and ⁽¹⁰²⁾

a light source assembly for illuminating the stage, the light source assembly including -

a circuit board, and

a plurality of LEDs mounted on the circuit board for projecting light toward the stage,

wherein the light emitted from the LEDs is transmitted through the internally-reflective tube and out through the opening in the lamp holder.

28. (New) The cordless microscope as set forth in claim 27, further including a frosted filter positioned at the end of the lamp holder for filtering and diffusing the light emitted from the LEDs toward the stage. ⁽¹²⁸⁾